

the audio data is converted to a digital audio data at an audio data transmitting and receiving unit, stored in the ICS user frame, and transmitted to the destination telephone set; and

telephone communication is thereafter carried out with ICS user frames transmitted and received, the ICS user addresses in the ICS user frame including digital audio data including the ICS user address of the telephone set and the obtained ICS user address of the destination telephone set.

129. An IP terminal including a function of producing, and transmitting and receiving at least an ICS domain name and an ICS user address of the IP terminal, an ICS user address of a cataloged server and an ICS user frame, wherein:

the IP terminal is connected to a position of a home IP terminal by a user of the IP terminal for sending out to a user communication line an ICS user frame including at least the name of the ICS domain and the ICS user address of the IP terminal produced in the IP terminal; and

the address of the ICS user frame includes the ICS user address of the IP terminal and the ICS user address of the cataloged server, so that the IP terminal can receive the ICS user frame including a report of cataloging from the user communication line.

130. An integrated information communication system including two or more access controllers, wherein:

an access control apparatus on an originating side converts a transmission ICS user frame, inputted from an ICS logical terminal at an end of a user communication line, to an ICS network frame, which is transferred in the integrated information communication system;

an access control apparatus on a receiving side receives the transmitted ICS network frame arrived thereat and restores the ICS network frame as the ICS user frame; and

the ICS user frame including a digitalized audio signal.